REMARKS

I.   Introduction

In response to the Office Action dated December 16, 2003, claims 1, 12, 23 and 34 have been amended. Claims 1-41 remain in the application. Re-examination and re-consideration of the application, as amended, is requested.

II.   Non-Art Rejections

In paragraphs (3)-(4), on page 2 of the Office Action, claim 34 was rejected under 35 U.S.C. §112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which Applicant regards as the invention.

Applicant's attorney has amended claim 34 to overcome this rejection.

III.   Prior Art Rejections

A.   The Office Action Rejections

In paragraphs (1)-(2), on page 3 of the Office Action, claims 1-41 were rejected under 35 U.S.C. §103(a) as being unpatentable over Kahn et al., U.S. Patent No. 6,135,646 (Kahn) in view of Kawamura et al., U.S. Patent No. 5,778,388 (Kawamura).

Applicant's attorney respectfully traverses this rejection.

B.   Applicant's Claimed Invention

Applicant's independent claims 1, 12, 23 and 34 are directed to a system, method, article of manufacture and data structure for assigning sequence numbers in a computer-implemented system. Claim 1 is representative, and comprises:

(a) a computer system; and

(b) sequence number assignment logic, performed by the computer system, for generating a recoverable, unique sequence number for assignment to an application, wherein the sequence number is contained in a control page stored in a database on a data storage device coupled to the computer system and shared with other computer systems, and updates to the control page are serialized across all of the computer systems.

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C.   The Kahn Reference

Kahn describes methods of managing digital objects in a network. Holders of rights in digital objects are enabled to control terms and conditions under which they are accessed by users in a network, or are granted to others.

D.   The Kawamura Reference

Kawamura describes a database management method and a database management system in which transactions need not be stopped at a synchronization point (syncpoint) acquired at a fixed interval of time, when a point to acquire a syncpoint is reached in a database control procedure, a syncpoint acquisition start log is output and then a syncpoint acquisition flag is set ON in a page control table of each updated page existing in a buffer pool. In the operation, a list of update page control tables is also created to write in the database the pages which are indicated in the list thus prepared. However, for a transaction accessing the pertinent updated page prior to the write operation thereof in the database, the data write operation is performed before the page is referenced, thereby enabling the access to be performed to the database without interrupting the transaction.

E.   Applicant's Claims Are Patentable Over The References

Applicant's independent claims 1, 12, 23 and 34 are patentable over the cited references because these claims include limitations not shown by the references.

The Office Action asserts that Kahn teaches that the sequence number is contained in a control page stored in a database on a data storage device" in Fig. 2, element 54. The Office Action asserts that "a control page" corresponds to the "handle server 1042," in Fig. 1, and Fig. 2, element 58, and at col. 9 lines 2 - 5. The Office Action asserts that, since the handle server can return a list of pointers associated with the handle, the handle server must contain "a page" that store the sequence number and the pointer. The Office Action asserts that "the management system" 54 corresponds to the "storage device." However, the Office Action admits that Kahn does not disclose that the unique sequence number is recoverable, but nonetheless asserts that Kahn teaches that the "handle" or "sequence number" should be globally unique across the network, and should be essentially permanent at col. 10, lines 50 - 51. Moreover, the Office Action asserts that Kawamura discloses a

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method of processing a synchronization point in a database management system, that Kawamura teaches "a syncpoint acquiring part 26 for guaranteeing an operation to periodically set the databases to an integral state" (col. 5 lines 58 - 60, Kawamura), and that Kawamura also teaches "acquiring a synchronization point (syncpoint) in said database management system for enabling a plurality of transactions to be performed concurrently in which a restart recovery process is assumed at an occurrence of a system failure" at claim 6. Consequently, the Office Action asserts that it would have been obvious to one with ordinary skill in the art at the time the invention was made to apply the teaching of Kawamura into the system of Kahn because the motivation is to improve the accuracy of databases, keep the databases up to date for other operations, and to make the handle recoverable.

Applicant's attorney disagrees. Neither reference teaches or suggests Applicant's independent claims, as amended. Specifically, the references, taken individually or in combination, do not teach or suggest storing the sequence number in a control page, wherein the control page is stored in a database on a data storage device coupled to the computer system and shared with other computer systems, and updates to the control page are serialized across all of the computer systems.

Kahn merely describes a handle management system and a handle server, but neither can be construed as storing the control page containing the sequence number used by sequence number assignment logic in a database on a data storage device coupled to the computer system and shared with other computer systems. Further, each handle server in Kahn has its own hash range, and thus there is no need to serialize updates to the hash range.

Kawamura merely describes a database management system that synchronizes transactions therein, but nowhere does it describe a control page containing the sequence number used by sequence number assignment logic, or storing the control page in a database on a data storage device coupled to the computer system and shared with other computer systems, or serializing updates to the control page across all of the computer systems. Indeed, the Office Action's combination of Kawamura with Kahn merely comprises the application of hindsight to Applicant's invention.

Consequently, the references do not anticipate Applicant's independent claims 1, 12, 23 and 34, because they fail to teach all the limitations found in these claims. Moreover, it is asserted that the various elements of the Applicant's claimed invention together provide operational advantages over the cited references. In addition, it is asserted that Applicant's claimed invention solves problems not recognized by the cited references.

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Thus, Applicant submits that independent claims 1, 12, 23, and 34 are allowable over Kahn and Kawamura . Further, dependent claims 2-11, 13-22, 24-33, and 35-41 are submitted to be allowable over Kahn and Kawamura in the same manner, because they are dependent on independent claims 1, 12, 23, and 34, respectively, and thus contain all the limitations of the independent claims. In addition, dependent claims 2-11, 13-22, 24-33, and 35-41 recite additional novel elements not shown by Kahn and Kawamura.
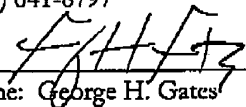
IV.   Conclusion

In view of the above, it is submitted that this application is now in good order for allowance and such allowance is respectfully solicited. Should the Examiner believe minor matters still remain that can be resolved in a telephone interview, the Examiner is urged to call Applicant's undersigned attorney.

Respectfully submitted,

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